

EDITORIAL COMMENT

This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to every member of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

Retinitis Pigmentosa—A New Treatment.—Retinitis Pigmentosa is a degenerative disease of the retina that is found more frequently in men than in women. There seems to be a definite hereditary tendency, and family trees which show the transmission of this disease through several generations have been published. The etiological factors of the disease have never been established. The course is well known, however, starting soon after puberty with the symptom of hemeralopia (night blindness) of a mild degree. This gradually increases in severity until the patient is almost blind at night. The field of vision early shows a peripheral loss which gradually increases in area until only a very small central field is left. Usually around the age of forty this remnant disappears also.

Fairly good central vision is maintained for a long time and it is not until the field is very small that the vision begins to fail rather rapidly. During the course of the disease there occur many periods, often several years in length, in which the disease makes no progress; but no cases of spontaneous recovery have been recorded. Inevitably the field begins to shrink again and eventually blindness overtakes the victim.

Fundus changes are very characteristic. In the early stages we see far in the periphery that the retinal pigment has migrated and is gathered in very typical bone-corporuscle shaped masses. As the degeneration progresses, these pigment changes invade more and more of the retina and gradually approach the macula. The retinal vessels become very narrow, the arteries almost hair fine, and the disk becomes a dirty, grayish yellow. Finally the pigment changes involve the whole of the fundus, only the region of the macula itself not showing these changes.

Up to the present, when the ophthalmologist has made the diagnosis of retinitis pigmentosa he has, at the same time, condemned the patient to eventual blindness. Treatment has been rather futile and consisted chiefly in stimulating the blood supply either by instillation of dionin, hot compresses, or subconjunctival injections of hypertonic salt solutions.

Recently, F. Wibaut¹ of Amsterdam published some startling results which may change this poor prognosis. In view of the fact that men were much more frequently attacked than women, he thought of trying the newly isolated female sex hormone. He started with moderate doses, with no results; however, when he gave tremendously large doses, he obtained marked improvement in one case.

In this case he gave one hundred mouse-units subcutaneously, daily, for a period of over six weeks. During this time the field which had shrunk to about 15 degrees in size broadened out to about three-quarters of the normal, and the vision improved from one-fifteenth to one-third. In other cases he did not have such brilliant success; two showed a moderate improvement, whereas two others, one of which was practically blind, did not improve. This work has been tried out at various other clinics with, usually, poor success.

Herrenschwand of Innsbruck, Austria, however, showed the writer the results in a successfully treated case. The patient was a comparatively young man who showed all the typical signs of retinitis pigmentosa: hemeralopia, shrinking field, and fundus changes. After vigorous treatment this field became normal, the hemeralopia less, and his vision improved though the fundus showed no diminution in the pigment changes.

Perhaps the poor success of other workers has been due to the fact that the therapy was chiefly tried in old, advanced cases. As the extract can now be obtained in a form to be given by mouth, we are now in a position to treat patients without the necessity of a daily visit. It is to be hoped that anyone to whom one of these desperate cases comes will try this new method of treatment, and publish the results so additional data can be gathered. In this way we can learn if there is anything to be gained from this treatment or not.

490 Post Street.

D. K. PISCHEL,
San Francisco.

Immunity in Diphtheria.*—Questions not infrequently arise concerning the status of individual immunity to diphtheria following an attack of this disease. Many assume that an attack confers immunity. If the reverse opinion is held it seems difficult to say wherein the patient, treated with antitoxin, differs from an individual treated with toxin-antitoxin or with toxoid. Discussions and such statements, for example, as quoted¹ in a recent number of the *American Journal of Public Health*, "We should imagine a fever nurse who had had diphtheria to have the maximum possible resistance to a second attack of that disease, yet it is possible even for her to die from it," indicate that the elements of the immunity status are frequently not pieced together, yet this status seems virtually proved. It is necessary only to gain a dynamic rather than a static concept.

* From the Department of Bacteriology, University of California Medical School, San Francisco.

¹ Note, Am. J. Pub. Health, 22:6, 1932.

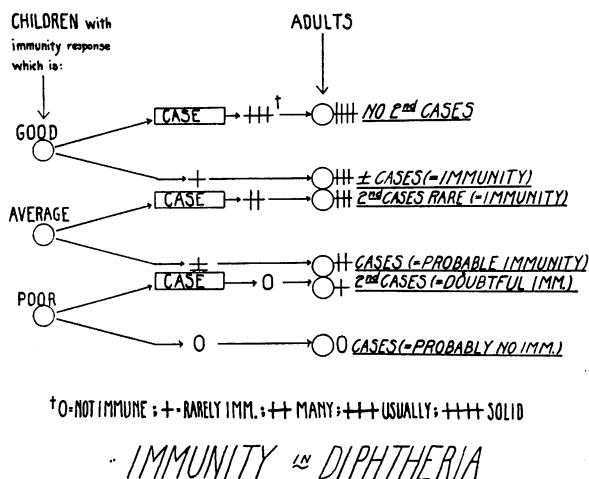


Fig. 1.—A constitutional factor indicates that a given child has, e. g., an average immunity response: During childhood the child may have diphtheria, after which, schematically, a two plus immunity is indicated. As an adult a three plus immunity is indicated—such persons rarely would have diphtheria a second time. The factors (1) immunity response, (2) presence or absence of an infection, and (3) environment account logically for any status. They may be weighed in the individual case.

The steps, which could be more elaborately supported lead as follows:

First: It was demonstrated in Hamburg² that of 4761 patients, 5.8 per cent had had diphtheria. Considering that the exposure a second time would be at least much less than 100 per cent, the actual incidence indicates that in a considerable number of cases adequate immunity is *not* conferred.

Second: A mass of data accumulated in New York City³ and elsewhere indicates that age correlates with immunity, considering large groups. There exists adequate immunity usually for the first thirty or forty weeks⁴ of life; the number of immune children of early school age is very low; and adults may be immune in 60 per cent or more cases. Kelly has shown that in California—and our experience with students is confirmatory—the normal percentage of immune adults in the state is much lower than the eastern reports might lead one to expect—sometimes less than 20 per cent in 18 to 28 age groups are immune.

Third: Okell⁵ made a thorough study of immunized Schick-negative children between one and seven years after immunization. Of 440, twenty-two were Schick-positive (5 per cent). Of these, twenty developed one-fifth to one-twenty-fifth units of antitoxin per cubic centimeter of serum after the Schick test. The two refractory children had required two series of toxoid-antitoxin to give the original immunity.

The conclusion seems properly limited to one definite picture. A considerable number of constitutions are refractory to the development of immunity. From this group come many cases in

children, and perhaps most of the adult cases of diphtheria. Such individuals, in a considerable number of instances, do not develop an immunity following one attack, and may thus acquire the disease a second time. Furthermore, a number of children, susceptible as such, and evidently depending on environment, become immune as adults. The majority of cases are in children. The attack may or may not confer immunity in the child, but he may yet be immune as an adult, depending on the status of his individual response to a given environment. Although such analysis involves several variable factors—the normal age-immunity status, and the degree to which the individual response is refractory—these are in themselves clear-cut and established. The long-range perspective of the immunity in a disease in which mechanism is clearer at least than in any other should not be so confused, as is frequently the case.

Medical School, University of California.

M. S. MARSHALL,
San Francisco.

Didactic Versus Practical in the Teaching of Clinical Medicine.—In general it may be said that the duty of clinical departments, like that of scientific ones, is to show how information may be gathered, and, when attained, how it may be interpreted. The student must be given the chance to observe and record and be inspired to study and think. He should get his facts for himself from patients, with such guidance as seems necessary, not have them handed to him in some sort of classroom exercise. . . . In speaking of the relative value of practical training and didactic instruction in clinical medicine, I should like to mention the educational value of responsibility. There is nothing which incites medical students to the acquisition of professional skill more than giving them responsibility for the care of patients. The sooner in their careers this can be managed the better. I recently read the address of welcome delivered by a distinguished anatomist to the students entering one of our leading medical schools. He had much to say of the awfulness of standardization in medical education and the necessity for freedom of thought and the development of a truly scholarly attitude on the part of the student. He must become learned since he is entering a learned profession. But learning is not all that is needed to make the good physician. Medical science is an applied science, and pure science and applied science are as far apart as the poles. They may, to a certain extent, speak the same language but their objects are utterly diverse. One is a means to an end; the other is an end in itself. The one seeks truth for truth's sake; the other seeks truth to help mankind. Which represents the loftier motive depends on one's philosophy of life. Medicine, however, is an applied science. In the training of students we should never lose sight of this, and the art of medicine, which includes but transcends the science, takes root in the feeling of responsibility the physician has for his patient's welfare and his desire to heal him. . . . The question is: What is the most important thing in medical education? Is it to cram the student just as full as we can of facts so that he may explode at the time of his examination? Or should we try to prepare him and acquaint him with the methods of acquiring knowledge so that he may continue to grow after he passes out from under our tutorship? The latter course will teach him the joy there is in acquiring knowledge as compared with getting information when it is handed to him on a silver platter. Such a person trained in the way to acquire knowledge must continue to grow. . . . —*Journal of the American Medical Association*, April 30, 1932.

² Reiche: *Med. Klin.*, 9:1663, 1913.

³ Park: Quoted in Rosenau's "Preventive Medicine and Hygiene," p. 195, 1928.

⁴ Neill, Gaspari, Richardson, and Sogg: *J. Immunol.*, 22:117, 1932.

⁵ Parish and Okell: *Lancet*, 2:322, 1928.